

WHAT IS CLAIMED IS:

- Sub A1
1. An isocyanate-reactive component useful for the production of a rigid closed cell polyurethane foam by a RIM process comprising:
- 5 a) from 0.5 to 30% by weight, based on total weight of isocyanate-reactive component, of a bio-based polyol,
- b) from 5 to 80% by weight, based on total weight of isocyanate-reactive component, of an isocyanate-reactive material having a functionality of at least 1 and a number average molecular weight of from 400 to 10,000,
- 10 c) a chain extender or a crosslinking agent,
- d) a blowing agent, and
- e) a catalyst.
2. The isocyanate-reactive component of Claim 1 in which up to 25% by weight of the total isocyanate reactive-component is the bio-based polyol.
- 15 3. The isocyanate-reactive component of Claim 1 in which up to 20% by weight of the total isocyanate-reactive component is the bio-based polyol.
4. The isocyanate-reactive component of Claim 1 in which at least 0.5% by weight of the total isocyanate-reactive component is the bio-based polyol.
- 20 5. The isocyanate-reactive component of Claim 1 in which at least 5% by weight of the total isocyanate-reactive component is the bio-based polyol.
- 25 6. The isocyanate-reactive component of Claim 1 in which the bio-based polyol is a blown soybean oil.
7. An isocyanate-reactive component useful for the production of a rigid closed cell polyurethane foam by a RIM process comprising:
- 30 a) at least 10% by weight, based on total weight of isocyanate reactive component, of a soybean oil based polyol,
- b) from 5 to 80% by weight, based on total weight of isocyanate-reactive component of a polyether polyol having

- c) from 1 to 75% by weight, based on total weight of isocyanate-reactive component of a chain extender,
- d) water, and
- e) a catalyst.

- a) intimately mixing the isocyanate-reactive component of Claim 1 with an organic polyisocyanate in an amount such that the ratio of NCO to OH groups is from 0.8:1 to 1.3:1 and
- b) introducing the mixture from a) into a mold.

a) intimately mixing the isocyanate-reactive component of Claim 2 with an organic polyisocyanate in an amount such that the ratio of NCO to OH groups is from 0.8:1 to 1.3:1 and

b) introducing the mixture from a) into a mold.

- a) intimately mixing the isocyanate-reactive component of Claim 3 with an organic polyisocyanate in an amount such that the ratio of NCO to OH groups is from 0.8:1 to 1.3:1 and
- b) introducing the mixture from a) into a mold.

- a) intimately mixing the isocyanate-reactive component of Claim 6 with an organic polyisocyanate in an amount such that the ratio of NCO to OH groups is from 0.8:1 to 1.3:1 and
- b) introducing the mixture from a) into a mold.

12. A RIM process for the production of a rigid, closed-cell polyurethane foam comprising:

Figure 1 consists of 15 subplots (a-o) showing the effect of various parameters on the growth of *E. coli*. Each plot shows log₁₀ CFU/g on the y-axis (0 to 10) against time in minutes on the x-axis (0 to 120). The subplots are arranged in a grid: (a) Temperature, (b) pH, (c) NaCl concentration, (d) Sucrose concentration, (e) Mannitol concentration, (f) Glycerol concentration, (g) Tryptone concentration, (h) Yeast extract concentration, (i) Casein concentration, (j) Peptone concentration, (k) Meat extract concentration, (l) Beef extract concentration, (m) Chicken extract concentration, (n) Fish extract concentration, and (o) Plant extract concentration. Each plot contains multiple data series representing different concentrations of the parameter, with growth curves showing the increase in bacterial concentration over time.

- a) intimately mixing the isocyanate-reactive component of Claim 7 with an organic polyisocyanate in an amount such that the ratio of NCO to OH groups is from 0.8:1 to 1.3:1 and
- b) introducing the mixture from a) into a mold.
- 5 13. A rigid, closed-cell polyurethane foam produced by the process of Claim 8.
14. A rigid, closed-cell polyurethane foam produced by the process of Claim 9.
15. A rigid, closed-cell polyurethane foam produced by the
- 10 process of Claim 10.
16. A rigid, closed-cell polyurethane foam produced by the process of Claim 11.
17. A rigid, closed-cell polyurethane foam produced by the process of Claim 12.

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